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AUTHOR Thomas, Don R.
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ABSTRACT

This paper summarizes discussions by behavior analysts on the issue of skill certification and licensing. The Department of Public Welfare funded two surveys to be conducted by the Minnesota Learning Center, each survey focusing on identifying relevant competencies and criteria to be used in assessing those competencies of behavior analysts. The Minnesota Guidelines for the Use of Aversive and Deprivation procedures were revised as a result of those surveys, thus recognizing the distinction between initial certification and maintenance of certification. Under the current version of the guidelines, retention of certification is a function of on-the-job performance as evaluated by a review committee. Also included is a series of definitions regarding levels of treatment intensity: (1) positive programing procedures, (2) mild procedures, (3) moderate procedures and (4) intense procedures. The result of using these guidelines and certification programs has been a marked increase in the number of behavior analysts employed and in the number of persons receiving treatment programed and supervised by behavior analysts. The list of competencies and criteria used is appended. (Author/LEB)

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STAFF COMPETENCIES REQUIRED FOR IMPLEMENTATION OF AVERSIVE AND DEPRIVATION PROCEDURES*

Don R. Thomas

Minnesota Learning Center

The idea of certifying individuals who demonstrate specific competencies has been argued for several years.

At the 1971 Conference on Behavior Analysis in Education at Lawrence, Kansas, the idea of skill certification was discussed. At that time some participants felt that certification was necessary to protect skilled professionals from the repressive regulation that could result from untrained persons using behavioral procedures improperly. Other participants felt that any certification process would cause loss of freedom to people already active in the field. The most emphatic statements about the freedoms to be lost focused on the loss of opportunities to test new procedures. The only agreement that was reached was that "we really should talk about this issue the next time we get together".

In the Spring of 1974, a conference at Drake University emphasized the concept of Certification, and a number of participants indicated that they were in fact certifying individuals as competent to perform specific jobs. For example, the Achievement Place people at Lawrence, Kansas had initiated a program of certifying their teaching parents, and the Behavior Analysis Follow Through Program was implementing a program certifying classroom teachers who used their instructional procedures effectively.

At the Drake Conference, the panel discussion and audience participation sessions sounded like an "instant replay" of the earlier conference in Lawrence,

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Kansas. Some of the group still felt very strongly that regulation of behavioral procedures would be imposed as the result of stupid treatment errors made by unskilled persons. Another faction continued to argue that certification of competent individuals would reduce opportunities to switch into new activities and to do research on new procedurs and new subject populations. Some participants even argued that certification couldn't be done on the basis of identified competencies. Beth Sulzer-Azaroff had presented the results of a survey which emphasized definition of necessary behavioral competencies. However, some of the conference participants felt that the only way that certification would be implemented in the near future would be to certify graduates of training programs. Such a process would discriminate against professionals who had been trained a few years too early or who had acquired their behavioral skills as a result of personal efforts after receiving their degree.

Meanwhile back at the ranch, or more appropriately, back in Minnesota snowdrifts, we had already begun to work on the certification issue. While working in a program that provides residential treatment services to young people with behavior problems we had found that there was no direct way to hire people who had skills in applied behavior analysis. There were appropriate hiring classifications for Social Workers, Teachers, Recreation Therapists, Nurses, Rehabilitation and Occupational Therapists, Psychologists, and others. In order to hire someone with skills in applied behavior analysis, it was necessary to find a classification for which the candidate might qualify incidentally. The top ten candidates on the Civil Service list of applicants then had to be called in for interviews, and subsequently rejected for spurious reasons until the employer could finally get to the

behaviorally skilled candidate. The process of hiring people through classifications which are different from the actual job descriptions is unfair to the other people on the list of candidates and to the individual who is hired. Many program administrators in Minnesota simply didn't attempt to hire behaviorally trained people. Because we were strongly committed to the applied behavior analysis technology, we developed a series of Civil Service job descriptions based on the competencies identified by the Sulzer-Azaroff, Thaw & Thomas Survey. It took a year and a half to get the career ladder prepared and in place, but the problem of hiring behaviorally skilled people was reduced.

However, placement on the list of available job candidates occurred as a result of demonstrating some skills rather than as a consequence of waving a degree or being recommended as a "good guy" by a former employer. It quickly became apparent that program directors and other employers were viewing the addition of an individual's name to the list of Civil Service applicants as a certification that the individual did indeed have a high level of skill. This perception was quickly amplified by Judge Larson's 1976 ruling in the Welch vs. Likins "right to treatment" case that Behavior Analysts could be substituted on a one-for-one basis with Psychologists. The judge went on to editorialize that because of their special skills in training the Behavior Analysts were sometimes more useful than Psychologists. The rapid, public, and almost unconditional acceptance of the career ladder as a certification process concerned everyone who helped develop the career ladder. We had developed screening procedures with the intention of identifying people with some basic skills in contingency management and suddenly everyone with the basic skills was considered expert enough to become involved with the

development and supervision of aversive and deprivation treatment procedures. We felt responsible for the situation because at the same time we were installing the career ladder for Behavior Analysts, efforts were begun to make regulation of behavior modification procedures less restrictive and more functional. Back in 1968 and 1969 there had been a lot of publicity about treatment errors involving behavior modification procedures. The Department of Public Welfare, subsequently, published very restrictive guidelines which required Central Office review of the use of any contingency management procedures. These guidelines remained in effect until Assistant Commissioner Loring McAllister, initiated a review. The working committee was made up of Loring McAllister, Travis Thompson, Terry Nelson, Roland Peek, Will Akin, and myself. The rule has been under continual revision for the past three years, but the residential treatment programs have been operating under the draft versions of the rule throughout that period. The guidelines establish interdisciplinary review committees which oversee implementation of aversive and deprivation treatment procedures. In the process of working through the series of revisions, the guidelines were taken to public hearing in December, 1975. The public response clearly demanded methods for identifying the competencies of persons who would be permitted to use aversive and deprivation procedures. Consequently, the Department of Public Welfare provided funding for two surveys focused on identifying relevant competencies and the criteria to be used in assessing those competencies.[1]

[1] Data presented throughout this presentation have been taken from the Minnesota Department of Public Welfare working papers on competency identification prepared by the Minnesota Learning Center staff at Brainerd State Hospital. A more detailed analysis of these results is being prepared for publication by Grimm, J. Reitz, Andrew, Grimm, B., and Thomas, D. R.

Sulzer-Azaroff, Thaw and Thomas had conducted a survey in 1973 primarily of JABA authors and editors to determine the competencies most necessary for behavioral practitioners. Utilizing the results of that survey and job descriptions of practitioners, we had developed a career ladder for behavior analysts. In the process, the original 68 competencies and criteria were reduced to 44 items. Those 44 items became the raw material for the first survey. The survey contained 44 competency items and 44 screening criterion items. Respondents were asked to rate the relevancy of competency items to users of aversive and deprivation procedures on a scale from 1 ("irrelevant") to 5 ("highly relevant"). Respondents were also asked to rate the adequacy of screening criterion items in measuring these competencies on a scale from 1 ("inadequate") to 5 ("highly adequate"). A total of 311 surveys were distributed. Of these, 93 were sent to members of the Minnesota Association of Behavior Analysis (MinnABA) and 218 were sent out of state to a national sample of professionals who had published in the areas of aversive and deprivation procedures. Eighty-four completed surveys (i.e., 27%) were returned.

Of the completed surveys, 82% had specific item related comments; 34% contained more general comments and 23% suggested additional competencies and criteria. These data are present in Table 1.

Table 1

General Survey Results

	MinnABA		National		Total	
	No.	%	No.	%	No.	%
Distributed Surveys	93		218		311	
Completed Surveys	30	32.26	54	24.77	84	27.01
Completed Surveys with Specific Item Comments	24	80.00	45	83.33	69	82.14
Completed Surveys with General Comments	11	36.67	18	33.33	29	34.52
Completed Surveys with Additional Competencies & Criteria	12	40.00	7	12.96	19	22.62

The survey items were grouped into 11 categories. These categories and the mean rating for competency and criterion items in each category are presented in Table 2.

Table 2

Mean Rating of Competency and Criterion Items by Category

	Competency		Criterion	
Category:	$\bar{X}$ Rating	Rank	$\bar{X}$ Rating	Rank
Measurement	4.12	4	3.88	3
Behavioral Observation	4.23	3	4.02	1
Behavior Modification Model	4.07	5	3.77	8
Communication	3.66	8	3.80	6
Administration	4.00	6	3.62	10
Ethics, Law and Philosophy	4.26	2	3.78	7
Design	3.64	9	3.80	5
Assessment, Goal Formulation & Targeting	4.50	1	4.00	2
Research	2.61	11	3.46	11
Techniques	3.94	7	3.80	4
Training	3.10	10	3.76	9

It can be seen, for example, that the mean rating for competency items in the Ethics, Law and Philosophy category was 4.26 or slightly less than "highly relevant" and that the mean rating for criterion items in this category was 3.78 or slightly more than "relevant." Ranks for the categories are also presented in Table 2. Thus, although competency items in the Ethics category are ranked second, criterion items are ranked seventh. For these 11 categories, the Spearman Rank Correlation between competency ratings and criterion ratings is $r_s = .609$ ($p \leq .05$).

Thus, there was a tendency for respondents who rated a competency item as relevant to rate the corresponding criterion item as adequate. The low ratings for competency items in the Research category ($\bar{x}$ rating = 2.61 or slightly less than "relevant") led to the decision to delete research as a competency in the revised list. The high ratings for the competency items

in the Ethics, Law and Philosophy category ($\bar{x}$ rating = 4.26) led to the decision to expand this area by delineating separate Ethics and Law categories.

Criterion items were grouped into 8 categories representing major types of criteria. These categories, the number of items in each category, the mean ratings of items in each category, and the mean ranks of items in each category are presented in Table 3.

Table 3

Mean Ratings and Ranks of Criterion Items by Type of Criterion

	No. or Items	$\bar{X}$ Rating	$\bar{X}$ Rank
1. Written proposal or portion of proposal	4	4.00	5.1
2. Trainee and/or audience data	5	3.89	13.4
3. Objective or short answer test	6	3.88	14.9
4. Listing, explanation or illustration	9	3.83	19.3
5. Reliability data	3	3.81	21.3
6. Project report or graphs to APA specs.	2	3.73	26.5
7. Supervisor certification	6	3.62	30.7
8. Papers, project or discussion with references to published literature	9	3.49	37.6

The "paper, project or discussion with references to published literature," "supervisor certification," and "project report or graphs to APA specifications," types of criteria were considered the least adequate by respondents. These low ratings led to the decision to generally eliminate these types of criterion items. Only one revised criterion item calls for citing literature and the literature to be utilized is specified in advance. All supervisor certification criteria and criteria referencing APA specifications have been deleted.

The survey also included a space for commentary following each of the 44 competency/criterion items. A total of 716 comments were received. Each comment was scored as falling in one of three possible categories:

1. Comments suggesting possible changes in a competency

2. Comments suggesting possible changes in a criterion
3. Irrelevant comments

Thus, only comments which either made specific suggesions for item changes, or at least suggested a direction that changes might take, were counted in the first two groups. Irrelevant comments included those that were redundant with the respondents' numbered rating (e.g., "not relevant," "dumb dumb dumb," "ok, I guess," "very important") and comments relating to specific job categories (e.g., "relevant for supervisor only," "not needed for technician"). This scoring procedure resulted in 58 (8.1%) competency related comments, 312 (43.6%) criterion related comments, and 346 (48.3%) irrelevant comments. Further analysis of the comments suggested that when respondents were satisfied with a given competency item, they recommended improvement of the corresponding criterion item even though the latter was considered "adequate" or better. If respondents were dissatisfied with a competency item, there was a tendency to ignore the corresponding criterion in terms of criterion related comments and to make more irrelevant comments.

In October, 1976, a panel was convened for three days at the Minnesota Learning Center for the purposes of reviewing survey results, revising competencies and criteria, and recommending a screening process for the identification of "experts" in the use of aversive and deprivation procedures. Panel members were Don R. Thomas (Minnesota Learning Center), William Farrall (Farrall Instruments), Beth Sulzer-Azaroff (University of Massachusetts), J. A. Grimm (Minnesota Learning Center), and Travis Thompson (University of Minnesota). Other participants included Andrew Reitz, Carol Myers, Karl Schwarzkopf, and Charles Fields (Minnesota Learning Center) and Jan Thompson and Brenda Grimm (Brainerd State Hospital). The group used the results of the first survey to identify a somewhat reduced list of competencies. Then

the group revised the associated criteria, largely on the basis of the comments section of the first survey. Thus, at the end of the conference, we had a set of competencies on which we had some data regarding peer acceptance and a set of criteria for which we had no data base at all. As a consequence, while the competencies were being incorporated into the guidelines which control the use of aversive and deprivation procedures, we conducted a second survey focused on the acceptability of the criteria.

A total of 202 surveys were distributed. Eighty completed surveys were returned (i.e., 39.6% of the surveys distributed).

Of the completed surveys, 71.3% had specific item related comments and 22.5% contained more general comments. These data are presented in Table 4.

Table 4

Criteria Survey Results

	MinnABA		National		Total	
	No.	%	No.	%	No.	%
Distributed Surveys	152		50		202	
Completed Surveys	53	34.9	27	54.0	80	39.6
Completed Surveys with Specific Item Comments	37	69.8	20	74.1	57	71.3
Completed Surveys with General Comments	11	20.8	7	25.9	18	22.5

The survey contained 32 items. Each item consisted of a defined competency area and a suggested screening criterion designed to measure that competency.

Respondents were asked to rate the adequacy of each screening criterion in measuring the corresponding competency on a scale from 1 ("inadequate") to 5 ("highly adequate"). The average screening criterion item generated a mean rating of 3.99, or midway between "adequate" and "highly adequate." Mean ratings on individual criterion items ranged from 3.59 to 4.33 (R=0.74). These data are presented in Table 5.

Table 5

Overall Mean Item Ratings and Ranges

	Overall Mean Rating	Rating Range
MinnABA	3.99	3.52 - 4.40 (0.88)
National	3.99	3.58 - 4.54 (0.96)
Total	3.99	3.99 - 4.33 (0.74)

The screening criterion items were grouped into four categories. These categories and the mean ratings for the items in each category are presented in Table 6.

Table 6

Mean Rating of Criterion Items by Type of Criterion

Criterion Type:	MinnABA	National	Total
Simulation	4.13	4.15	4.14
Written Exam	4.00	4.05	4.02
Rule 39 Committee	3.92	3.84	3.89
Oral Exam	3.68	3.79	3.72

It can be seen from the table that there are large differences among the various types of criterion items. Simulation criterion items were consistently rated as the most adequate type of criterion, followed by the written exam items, the review committee items, and the oral exam items. However, every type of criterion item was rated as more than "adequate" by the raters.

In addition to analyzing the item ratings, the survey results were analyzed for content of enclosed comments. Over 70% of the surveys contained one or more comments specific to given items and a total of 361 specific item comments were received. In comparison with the first survey, there was a marked reduction in irrelevant comments. Sixty-five percent of the respondents' comments focused on the criteria and more than half of these comments clustered on the idea of being more specific. Since screening instruments, exam items, checklists, etc. had not been presented as components of the

criteria items, these comments are seen as defining additional work required to enable implementation of the screening process. There was no consistent trend in the remaining item comments and the general comments related most often to the extensiveness of the competencies and criteria and the conclusion that only very well trained personnel would qualify. Consequently, none of the results are seen as suggesting immediate additional revisions.

CURRENT STATUS OF THE GUIDELINES:

The Minnesota Guidelines for the Use of Aversive and Deprivation procedures were again revised in January, 1977, as a result of the surveys. This revision recognizes the distinction between initial certification and maintenance of certification. Under the current version of the guidelines, retention of certification will be a function of on-the-job performance as evaluated by a review committee.

Another new element to be added to this edition of the Guidelines is a series of definitions regarding levels of treatment intensity. Four levels are defined.

The first class of procedures is called Positive Programming Procedures. Positive Programming Procedures involve the use of positive reinforcement alone or in combination with benign response reduction techniques and/or instructional procedures. More specifically, benign response reduction techniques include exclusionary time out for periods of five minutes or less, contingent observation, social disapproval, and extinction. Instructional procedures involve techniques of rearranging or presenting stimuli from both the physical and social environment to increase the probability of appropriate behavior. Among these procedures are prompting or providing cues, giving instructions or warning, demonstrating, modeling, suggesting alternatives, graduated guidance, and removing provoking or tempting stimuli. All

of the procedures classed as positive programming procedures can be implemented without review by the committee charged with overseeing uses of aversive and deprivation procedures.

The remaining three levels all require prior committee review. In regard to these classes of treatment procedures, the guidelines read as follows:

> "Three levels are identified as mild, moderate, and intense. All three levels require equal consideration under the local review committee procedures of this rule. Identification of the levels of intensity, however, is intended to enable DPW to establish increased competency requirements for individuals who may propose the use of moderate and/or intense procedures, without establishing unnecessary or burdensome assessment and monitoring programs over individuals using procedures which involve few restrictions of client rights and no hazards to the client's welfare.
>
> A) Mild procedures: Included in this level of intensity are procedures which involve the following: 1) Contingent access to, or deprivation of, activities, goods, and services (except food, drink, and all life and health support substances); 2) Time-out from positive reinforcement by removal from view or from the room; 3) Overcorrection; 4) Delay or removal of goods and services other than those to which one is entitled; and 5) Restitution. These procedures fall into the mild class of procedures only so long as they do not require manual guidance of the client and can be implemented using verbal or instructional control.
>
> B) Moderate procedures: Included in this level of intensity are: 1) All uses of restitution, overcorrection, fines, time-out, etc. which involve manual guidance or physical control of the client to insure implementation of the treatment procedure. This specifically includes use of physical restraints and required relaxation; 2) Also included in this class are applications of noxious substances which include but are not limited to noise, bad tastes, bad smells, splashing with cold water, and all procedures which elicit startle responses; 3) The final sub-class in this category includes all instances of the use of extinction procedures directed toward target behaviors which are health threatening target behaviors.
>
> C) Intense procedures: Included in this class of procedures are those treatment activities which require special training, equipment, procedures, or interdisciplinary monitoring to insure the protection of the client while treatment is in progress. This includes: 1) Electric shock used in aversive condition; 2) Slapping or striking; 3) Deprivation of food,

water, or other life support substances; and 4) All other aversive and deprivation procedures not included in the mild and moderate categories above.

It is currently proposed that individuals certified at the mild, moderate, or intense levels would have to meet the following item criteria as specified in the list of competencies and criteria. (See handout)

Mild: Criterion items 4, 5, 6, 9 (written test only), 10, 12, 13, 16, 17, 18, and 20.

Moderate: Criterion items 1, 2, 3, 7, 9 (simulation exercise), 14, 15, 19, and 22, plus all mild criterion items.

Intense: Criterion items 8, 11, and 21, plus all mild and moderate items.

These guidelines will have to be brought back to another public hearing before they assume the force of law in Minnesota. However, the Department of Public Welfare's treatment programs have been operating under various revisions of the rule for almost three years. In addition, the screening procedures used to identify Behavior Analysts for State employment have been revised to incorporate the results of the surveys.

The implications of guidelines and certification programs are different for each of us. In Minnesota, the result has been a marked increase in the number of Behavior Analysts employed and in the number of persons receiving treatment that is programmed and supervised by Behavior Analysts. If administrators can have a way to separate skilled candidates from the rest of the pool of applicants, the graduates of effective training programs will be hired. There is no indication that we will soon see an end to the lawsuits demanding appropriate, effective, and well-documented individualized treatment. This pressure will continue to generate efforts to establish accountability mechanisms and quality control.

The debate about whether or not to certify should be over. It can be

done, and it is being done. Our clients want protection and our employers demand accountability. Future discussions should focus on comparisons of the benefits and hazards of certification processes that are in use so that professionals can improve in establishing control systems which protect our clients and make our procedures more attractive to human services systems.

CRITERIA FOR PERSONNEL UTILIZING
AVERSIVE OR DEPRIVATION PROCEDURE

I. Competencies Required to Obtain Initial Certification

1. COMPETENCY: Identifies target behaviors in relation to antecedent and consequent environmental events which are associated with them and identifies direction of desired behavior change.

   CRITERION: (Simulation exercises) Given one video taped example each of inappropriate stimulus control, behavioral deficit, and behavior excess, the candidate identifies the appropriate targets, the associated antecedent and consequent events and specifies the direction of desired behavior change.

2. COMPETENCY: Conducts reliable measurement of targeted behaviors.

   CRITERION: (Simulation exercises) Given a video taped presentation of target behaviors, a recording procedure, response definition, data sheet and other necessary equipment, the candidate measures with 80% or better reliability using each of the following measurement techniques: a) frequency count; b) time sampling; c) interval recording; d) duration recording.

3. COMPETENCY: Selects a measure and develops a scoring method (data sheet design, instrument selection, procedure, instructions, etc.) for a specified target behavior, including identification of relevant collateral behaviors.

   CRITERION: (Simulation exercises) Given a video taped presentation of a behavior to be targeted for deceleration, the candidate operationally defines the targeted response and at least two relevant collateral behaviors, specifies and defines the type of recording procedure to be used, with specific directions on how the procedure is to be used, designs a sample data sheet, and justifies the selections made.

4. COMPETENCY: Operationally defines and illustrates observational recording techniques.

   CRITERION: (Written test) Given five recording techniques (frequent count, interval recording, time-sampling, duration recording and permanent product) the candidate operationally defines each and matches each technique with appropriate examples.

5. COMPETENCY: Identifies variables which may prevent appropriate evaluation of treatment effects.

   CRITERION: (Written test) Can explain the effects of at least five of the following: maturation, non-contingent reinforcement, concurrent shifts in multiple independent variables, sensory abnormalities, improper definition of dependent variable, consistency of implementation of treatment procedures. Given two reports of treatment effects, can identify variables which confound the relationship between treatment and outcome.

6. COMPETENCY: Is familiar with ethical issues, standards, and practices.

   CRITERION: (Written test) Given bibliography of selected readings, the candidate will score at least 90% on an objective examination.

7. COMPETENCY: Incorporates ethical standards in program design, implementation, communication, and evaluation.

CRITERION: (Simulation exercises) Given an illustrative problem situation, an aversive and/or deprivation program designed by the applicant is rated for consistency with a checklist of ethical standards. The checklist on ethical standards will be derived from the standards recommended by the Association for the Advancement of Behavior Therapy to the American Psychological Association.

8. COMPETENCY: Identifies major ethical issues: a) Whose agent is the therapist? b) Who decides what is best for the client? On what grounds? c) Who has responsibility for the client? d) How does one decide who receives treatment and who doesn't? e) What are the pros and cons for: Changing behavior: Using aversive consequences? Reporting procedures and results? f) How much and what type information is given to the client? g) How are the human rights of the individual and the family best safeguarded?

CRITERION: (Oral interview) Given an illustrative problem situation, the candidate will relate these major issues to the problem solution.

9. COMPETENCY: Identifies Federal and State laws and legal precedents as they affect the conduct of education-treatment activities.

CRITERION: 1. (Written test) Given a bibliography of appropriate laws and legal precedents, the candidate will pass an objective examination with 90% accuracy. At a minimum, the bibliography will reference the following principles: a) treatment with trained staff in adequate numbers; b) the least restrictive alternative in treatment methods and setting; c) freedom from deprivation of normal goods and services without due process; d) freedom from participation in programs without informed consent being given; e) right to withdraw consent from treatment programs; f) education regardless of handicap for school aged; g) minimum wage in non-therapeutic work situations; h) individualized treatment plan. 2. (Simulation exercise) Given an illustrative problem situation, the candidate will correctly identify violations of legal precedents and/or laws.

10. COMPETENCY: If familiar with DPW Rule 39.

CRITERION: (Written test) Passes objective exam on the details of Rule 39.

11. COMPETENCY: Knowledge of current regulations and utilization of FDA approved aversive stimulation devices including types of available instrumentation, knowledge of dangers and side effects and knowledge of dangers associated with the operation of apparatus.

CRITERION: (Written test and simulation exercise) The candidate will pass an objective test over this area and will correctly identify hazards shown in at least three video taped segments.

12. COMPETENCY: Demonstrates familiarity with current literature on application of widely validated aversive and deprivation procedures.

CRITERION: (Written test) Given bibliography of selected readings, the candidate will pass objective test on content. In Addition, the candidate will appropriately reference this literature in proposing procedures to alter a problem behavior in the simulation exercises required to demonstrate competencies in designing programs.

13. COMPETENCY: Programming for behavior change: Lists the essential steps in designing and conducting behavior change activities directed toward altering a behavioral excess or deficit.

CRITERION: (Written test) Given a brief narrative description of the problem and its history, the candidate can describe in writing the steps necessary to design a behavior change program based on positive reinforcement. The description must include at least the following: a) the targeted behavior stated in objective and quantifiable terms; b) the objective or goal of the treatment program; c) the change procedure to be employed, including the stimulus circumstances and environment under which the treatment would take place, the baseline procedures, the positive consequences to be provided, the schedule or other procedure of delivering the consequences contingently; d) the method of measuring the behavior and consequences throughout the treatment program; e) control of probe techniques to determine the necessity of continuing treatment; f) a plan for program generalization and maintenance; g) the conditions under which the program would be changed or terminated.

14. COMPETENCY: Writes a proposal for a behavior change (i.e., habilitative/educational) program.

CRITERION: (Simulation exercise) Given a brief narrative description of the problem and its history and a video taped demonstration of the problem behavior, the candidate writes a program which incorporates the following: a) the targeted behavior stated in objective and quantifiable terms; b) the objective or goal of the treatment program; c) the change procedure to be employed, including the stimulus circumstances and environment under which the treatment would take place, the baseline procedures, the positive consequences to be provided, the schedule or other procedure of delivering the consequences contingently; d) the method of measuring the behavior and consequences throughout the treatment program; e) control or probe techniques to determine the necessity of continuing treatment; f) a plan for program generalization and maintenance; g) the conditions under which the program would be changed or terminated.

15. COMPETENCY: Provides a written report of the program effects.

CRITERION: (Simulation exercise) Given illustrative case study material, the candidate will write a report suitable for submission to a county or state agency at the time of termination of treatment or transfer. The report will include the following elements: a) client description, name, age, sex, diagnostic and other psychometric information; b) a brief history leading to the problem which was treated, c) an objective description of the problem including quantification of the pre-treatment problem intensity and the current levels of behavioral occurrences (frequency, duration, etc.); d) a description in minimally technical but accurate language of the procedures employed; e) a quantitative, (preferably graphic) summary plus a narrative description of the results; f) recommendations for methods of increasing the probability of program generality to a new setting.

16. COMPETENCY: Identifies variables which may contraindicate specific treatment procedures.

CRITERION: (Written test) For each of five procedures, the candidate can identify the possible client/or program characteristics which would indicate rejection of these procedures as inappropriate or unsafe. Examples include: a) using Gatorade or milk for hydration in the Foxx-Azrin toilet training program; b) painful shock; c) physically enforced over-correction; d) food/candy reinforcement; e) seclusion time-out.

17. COMPETENCY: Is familiar with procedures (which are frequently used in behavior therapy and in educational/habilitative programming) resulting from identification of behavior problems.

CRITERION: (Written test) The candidate can identify for each item on a selected list of procedures, the following characteristics: degree of intrusiveness (i.e., not intrusive vs mild to very intrusive), time to become effective (very short vs moderate to long), durability and generality of effect (very durable and easily generalized vs limited durability and generalizability), likelihood of side effects (none or minimal vs occassional to frequent), and risk of harm to client or staff (none or minimal vs significant). At a minimum, the list of procedures will include the following: 1) Extinction; 2) Reinforcement of incompatible behaviors; 3) Time-out in room; 4) Graduated guidance; 5) Restitution; 6) Response cost; 7) Required relaxation; 8) Time-out (separation); 9) Restraint; 10) Noxious noises, smells, etc.; 11) Deprivation of food or water; 12) Slapping, spanking; 13) Painful skin shock.

18. COMPETENCY: Is familiar with procedures for arranging contingent relationships between targeted responses and consequences which are available in the natural environment.

CRITERION: (Written test) Given as examples three target behaviors which are measured respectively by their duration, intensity, and frequency, the candidate will specify consequences for each which should increase the behaviors and will also specify consequences for each which should decrease the behaviors. The consequences identified should already exist in this environment or be available without substantial additional funds or resources. The candidate will also specify the treatment environment (preferably the candidate's work setting).

19. COMPETENCY: Must be able to devise at least two alternative treatment procedures in each of three levels of intrusiveness of intervention.

CRITERION: (Simulation exercise) Given a video taped example of a behavior to be decelerated, the candidate will briefly describe two alternative treatment procedures from each of the three levels of intrusiveness, all of which can be justified as having a reasonable likelihood of reducing the problem behavior.

20. COMPETENCY: Is familiar with learning principles and the treatment procedures which have been derived from them.

CRITERION: (Written test) Given a sample of at least twenty written definitions and/or examples, the candidate will correctly match from a list of phenomena and procedures with at least 90% accuracy. The pool from which the examples will be taken will include at least the following: Definitions: operant condition, positive reinforcement, negative reinforcement, differential reinforcement, punishment, avoidance, time-out, respondent conditioning, respondent extinction, covert sensitization, DRO, DRH, DRL, baseline, probe, deprivation, escape, required relaxation, token economy, EST, shock punishment, reliability, validity, steady state, restitution. Examples: stimulus control, shaping, chaining, fading, continuous reinforcement, interval schedule, multiple schedule, extinction, response cost, situation, desensitization, aversion therapy, over-correction, positive practice, reversal, restraint, graduated guidance, flooding, superstitious reinforcement, Premack Principle. (Simulation exercise) When shown video taped samples of the following procedures, the candidate can correctly identify the procedure with 70% accuracy on a multiple choice test. Procedures: positve reinforcement (social, token), stimulus control, extinciton, seclusion time-out, time-out, response cost, reinforcement or incompatible behavior, desensitization, aversion therapy, positive practice, over-correction, DRO, contingent observation, restraint, graduated guidance, flooding, superstitious reinforcement, restitution.

21. COMPETENCY: Identifies pool of procedures which may be used in human services settings to alter staff behavior in order to enable implementation of treatment programs.

CRITERION: (Oral interview) Describes procedures which can be used without violating DPW work rules, union contracts or Department of Personnel policies and procedures.

22. COMPETENCY: Communication: Written and Graphic

CRITERION: (Simulation exercise) 1. Written: Explicitly describes treatment program, in writing, so that a naive individual who follows the program does not make errors in demonstrating the procedure. (The task specified in Programming Competency #3 is utilized for evaluative purposes). 2. Graphic: Given video tape simulation of data collection situation and the raw data which results from the observation, the candidate will design a graph, plot the data, label the ordinates and otherwise identify the variables shown so as to graphically communicate the behavioral changes shown in the video taped presentation. (The task specified in Programming Competency #4 is utilized for evaluation purposes).

II. In-Service Competency Demonstrations Required to Retain Certification

23. COMPETENCY: Conducts reliable measurement of targeted behaviors.

CRITERION: Treatment programs submitted for committee review include reliability checks on data required to evaluate effects.

24. COMPETENCY: Incorporates ethical standards in program design, implementation, communication, and evaluation.

CRITERION: Two aversive and/or deprivation programs designed by the applicant are rated by the Rule 39 review committee for consistency with a checklist of ethical standards.

25. COMPETENCY: Does not violate Federal and State laws and legal precedents as they relate to the conduct of educational-treatment activities.

CRITERION: The Rule 39 review committee evaluates programs designed by the "expert" in terms of their consistency with a checklist of legal issues.

26. COMPETENCY: Does not violate DPW Rule 39.

CRITERION: The Rule 39 review committee will assess compliance with Rule 39 by comparing the job performance with the requirements of the rule on a standard checklist.

27. COMPETENCY: Writes proposals for behavior change (i.e., habilitative/educational) programs and provides written reports of program effects.

CRITERION: The Rule 39 review committee certifies that treatment plans submitted to them include at least the following: a) the targeted behavior stated in objective and quantifiable terms; b) the objective or goal of the treatment program; c) the change procedure to be employed, including the stimulus circumstances and environment under which the treatment would take place, the baseline procedures, the positive contingencies; d) the method of measuring the behavior and consequences throughout the treatment program; e) control or probe techniques to determine the necessity of continuing treatment; f) a plan for program generalization and maintenance; g) the conditions under which the program would be changed or terminated. In addition, the committee certifies that reports suitable for submission to a county or state agency have been prepared at the time of termination of treatment or transfer. The reports will include the following elements: a) client description, name, age, sex, diagnostic and other psychometric information; b) a brief history leading to the problem which was treated; c) an objective

description of the problem including quantification of the pre-treatment problem intensity and the current levels of behavioral occurrences (frequency, duration, etc.); d) a description in minimally technical but accurate language of the procedures employed; e) a quantitative, (preferably graphic) summary plus a narrative description of the results; f) recommendations for methods of increasing the probability of program generality to a new setting.

28. COMPETENCY: Identifies variables which may contraindicate specific treatment procedures.

CRITERION: The regular performance checklist completed by the Rule 39 review committee will certify that the therapist obtains appropriate interdisciplinary consultation (medical, dental, social work psychodiagnostic, etc.) regarding possible client characteristics which would contraindicate proposed behavior change program procedures prior to implementating the treatment programs.

29. COMPETENCY: Assessment, goal formulation and targeting.

CRITERION: The Rule 39 review committee evaluates the candidate's specification of appropriate and realistic program goals with a checklist. The checklist includes items such as operationalized target behaviors, the employment of the normalization principle, the availability of trained staff in adequate numbers, etc.

30. COMPETENCY: Can apply and demonstrate the effectiveness of procedures for various types of behavioral change categories.

CRITERION: The Rule 39 review committee certifies that the programmer applies at least one procedure for each of the following categories with a concomitant demonstration of procedural effectiveness: a) increase in beh behavior; b) decrease in behavior; c) maintenance of behavior; d) teaching a new behavior; e) stimulus control.

31. COMPETENCY: Supervision: Coordinates behavior change programs.

CRITERION: The Rule 39 review committee certifies that the candidate monitors program procedures at regular intervals; acts as supervisor for line personnel; and consults with parents as necessary.

32. COMPETENCY: Communication: Written, Oral, and Graphic.

CRITERION: The Rule 39 review committee will rate the effectiveness of the behavioral programmer in two types of oral and written reports: a) ratings will be given on the clarity of description of program procedures and rationales; b) ratings will be given on the clarity of the descriptions of program results.